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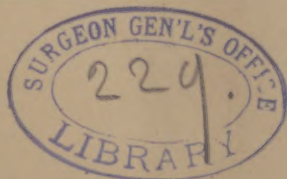
TO THE

# LITERATURE OF ELECTROLYSIS,

By W. WALTER WEBB.

[FROM THE ANNALS OF THE N. Y. ACADEMY OF SCIENCES,  
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XIX.—*Index to the Literature of Electrolysis and its Applications,*

1784–1880.

BY W. WALTER WEBB.

Read April 24th. 1882.



The following Index is confined to the literature of electrolysis and its applications, especially in electro-metallurgy; the whole subject of the various forms of the galvanic battery, its theory and uses, has been omitted; electro-capillarity and passivity are, however, included.

It is not claimed that the Index is complete, yet care has been taken to make it include the best-known English, French and German journals.

I must express my thanks to Prof. H. C. Bolton for his suggestion of the idea of compiling such an Index, for his kindness in allowing the plan of those published by himself to be copied, and for much assistance which he has given me.

I am indebted to the Index of the Literature of Ozone, published by Professor Leeds, for many of the references in the following Index.

W. W. W.

TRINITY COLLEGE,

APRIL, 1882.

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[For list of authorities, with abbreviations, etc., see the close of the Index.]

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	Troostwyk	Journ. de Phys., Nov., 1789.	Decomposition of water.
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	Gilbert	" 1, XLI, 107.	The same.
	Ritter	Gottl. Alm., 1801.	Electro-chemical decomposition.
	Simon	Gilb. Ann., VIII, 35.	Decomposition of H <sub>2</sub> SO <sub>4</sub> .
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1806	Sylvester Wilkinson	Nich., J., XV, 50, 28. " XIV, 342, 28.	Experiment in electrolysis Supposed production of HCl from H <sub>2</sub> O by electrolysis.
1807	Alemanì Chompré Berzelius Davy	A. c. p., 1, LXV, 323; Phil. Mag., 1, XXVIII, 339. A. c. p., 1, LXI, 58. " 1, LXI, 258. Phil. Trans., XCVII, 1; Phil. Mag., 1, XXVIII, 1, 104, 220; Nich., J., 2, XVIII, 339; 2. XVI, 79.	Electrolysis of H <sub>2</sub> O and HCl. Electrolysis of HCl and KClO <sub>3</sub> . Electrolysis of HCl. Decomposition by electri- city.
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	Descostils Seebeck	A. c. p., 1, LXIII, 77. N. Gehl., V, 482.	Electrolysis of salts. NH <sub>4</sub> amalgam by electro- lysis.
1809	Sylvester Théodore " A. B." Brande Davy	Nich., J., 2, XIX, 157. A. c. p., 1, LXIII, 5. Phil. Mag., 1, XXXIII, 87. " 1, XXXV, 111. " 1, XXXVI, 17; A. c. p., 1, LXX, 189, 225; Nich. J., 2, XVI, 321.	Electrolysis of the alkalis. Electrolysis of metals. On Davy's theory. Electrolysis of blood. Electrolysis of N and NH <sub>3</sub> .
	Davy	Phil. Trans., 1810, part 1; Phil. Mag., 1, XXXV, 401.	Electrolysis of Na and K.
	Davy Bucholz Pfaff Singer	Nich., J., 2, XXII, 149. Gehl., J., VII, 734. Nich., J., 2, XVII, 362, 28. " 2, XXIV, 174, 28.	Letter on electrolysis. Precipitation of metals. HCl by electrolysis. Electro-chemical experi- ments.
	Sylvester Van Mons	" 2, XXIII, 258. " 2, XXXIV, 179.	Electrolysis. The same.
1810	Davy	Phil. Trans., C, 16; A. c. p., 1, LXXV, 27, 129.	Electro-chem. researches.
	Gay-Lussac and Thénard	A. c. p., 1, LXXXIII, 197; Phil. Mag., 1, XXXV, 307.	Electrolysis of NH <sub>3</sub> .

1810	Wollaston	A. c. p., 1, LXXIV, 299.	Electrol. of the secretions.
1811	Anderson	Nich., J., 2, XXX, 183.	Electrolysis of H <sub>2</sub> O.
	Davy	" 2, XXIX, 112.	Electrolysis of O.
	Donovan	Phil. Mag., 1, XXXVII, 227, 245.	Davy's theory.
	Gay-Lussac and Thénard	A. c. p., 1, LXXVIII, 245.	Electrolysis.
	Grotthuss	" 1, LXIII, 5; Nich. J., 2, XXX, 112.	Metallic arborizations.
	Heinskin	Nich. J., 2, XXX, 157, 28.	Electrolysis of Na <sub>2</sub> CO <sub>3</sub> .
1812	Singer	" 2, XXXI, 90, 216.	Electrolysis.
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1813	Avogadro	A. c. p., 1, LXXXVII, 286.	Berzelius's theory.
	Berzelius	" LXXXVI, 146.	Theory of electrolysis.
1814	Brande	Phil. Mag., 1, XLIV, 124.	Electrolysis.
1815	Donovan	" XLV, 154, 308, 380.	Metallic arborization.
1818	Acton	Phil. Mag., 2, II, 112.	K by electrolysis.
1821	Wollaston	A. c. p., 2, XVI, 45.	Electrolysis.
1822	Fisher	Gilb. Ann., LXXII, 289.	Precipitation of metals.
	Van Mons	" LXXIII, 310.	Arborizations.
	Witting and Bischoff	" LXXIV, 424.	The same.
1824	Becquerel	Mem. de l'Acad., XI, 33.	Electrolysis with weak currents.
1825	De la Rive	A. c. p., 2, XXVIII, 190.	Electrolysis.
	Ferré	" XXVIII, 417; T. Ann., N. S., X, 262.	Application of the theory of electrolysis.
	Fisher	Pogg., IV, 291; VI, 43.	Precipitation of metals.
1826	Davy	Phil. Trans., CXVI, Pt. 3, 383.	Electrolysis and chemical changes.
	Davy	Phil. Trans., 1825, Pt. 2; Phil. Mag., 2, LXVII, 89; T. Ann., N. S., XI, 248.	Preservation of metals by electrolysis.
	Dumas	A. c. p., 2, XXXIII, 265.	Electrolysis of CaCO <sub>3</sub> .
	Fisher	Pogg., VIII, 488; IX, 255.	Precipitation of metals.
1827	Becquerel	A. c. p., 2, XXXV, 113, 23.	Electrolysis by weak currents.
	Davy	Phil. Mag., 2, I, 31, 94, 190.	History of electrolysis.
	De la Rive	A. c. p., 2 XXXV, 164; Pogg., X, 311.	Electrolysis of bromine.
	Fisher	Pogg., X, 603.	Precipitation of metals.
	Nobili	A. c. p., 2, XXXIV, 280, 419.	New phenomena in electrolysis.
	Pouillet	" XXXVI, 5.	Electrolysis.
	Sérullas	" XXXIV, 192.	The same.
1828	Davy	Phil. Trans., 1826, Pt. 3; Rep. of Arts, 3, V, 76.	Electrical and chemical relations.
	Fisher	Pogg., XII, 499.	Precipitation of metals.
	Libri	Edinb. So. Sci., 1, IX, 353; A. c. p., 2, XXXVIII, 100; Rep. of Arts, 3, VIII, 116.	Electrolysis of odorous substances.
1829	Fisher	Pogg., XVI, 124; Kastn. Archiv., XVI, 219.	Precipitation of metals.

1829	Becquerel	A. c. p., 2, XLI, 5; XLII, 225; Pogg., XVI, 306; Phil. Mag., 2, VII, 61; Berz., J. B., VIII, 20.	Electrolysis by weak currents.
1830	Becquerel	A. c. p., 2, XLIII, 131, 380; Pogg., XVIII, 143; Berz., Jahresb., X, 29; Phil. Mag., 2, VII, 226.	The same.
	Bonijol	Bibl. Univers., Oct., 1830. Am. J. Sci., 1, XX, 179.	Electrolysis of H <sub>2</sub> O by atmospheric electricity.
	Dumas	Rep. of Arts, 3, VIII, 370.	Deposits in lead pipe.
1831	Arago	" 3, XII, 119.	Electrolysis of zinc.
	Barry	Phil. Mag., IX, 357, 33.	Electroly. by atmospheric electricity.
	Becquerel	A. c. p., 2, XLVIII, 337.	Electrolysis of oxides of Fe and Mn.
	Brande	Pogg., XXII, 308; Phil. Mag., 2, IX, 237.	Electrolysis of organic substances.
	?	Br. A. A. Sci., 1831-32, 468.	Electro-metallurgy.
1832	Becquerel	Pharm. Centr., III, 527.	Titanium by electrolysis.
	Bonijol	J. Roy. Inst., I, 293; Am. J. Sci., 1, XXI, 368.	Decomp. of water by atmospheric electricity.
	Botts	Bibl. Univ., Sept., 1832; Am. J. Sci., 1, XXIV, 197.	Electrolysis.
	Hachette	A. c. p., 2, Sept., 1832; Am. J. Sci., 1, XXIV, 142.	Electrol. by the electric induction spark.
1833	Becquerel	A. c. p., 2, LII, 240.	Effect of vegetation on electrolysis.
	Becquerel	Mem. de l'Acad., XII, 581; A. c. p., 2, LIII, 105; Pogg., XXXI, 46; Am. J. Sci., 1, XVII, 383.	Electrolysis by weak currents.
	Bouchardat	Dingl., J., L, 289; J. Pharm., 1833, 457.	Electrolysis.
	Faraday	F. R., I, 87, 127; Phil. Mag., 2, III, 253, 450.	Electrolysis by frictional electricity.
1834	Avogadro	Mem. de l'Acad. Sci. T., II, 1; A. c. p., 2, LXXI, 5.	Electrolysis.
	Bessemer	Mech. Mag., 1864, 73.	Electro-metallurgy.
	Faraday	F. R., I, 195, 259; Phil. Mag., 3, IV, 291; V, 161, 252, 334, 424, 456; VI, 34, 125, 171, 272, 331, 410.	Electrolysis.
1835	Aimé	C. R., I, 471.	Electro-chem. apparatus.
	Becquerel	A. c. p., 2, LX, 164; Berl., Jahresb., XIV, 791.	Electrolysis by weak currents.
	Becquerel	C. R., I, 455.	Electro-chem. apparatus.
	Begriff	Ann. Ch. Pharm., XVI, 129.	Electrolysis.
	Botts	Bibl. Univ., 1835, 120; Am. J. Sci., 1, XXIX, 369.	Electrolysis by terrestrial magnetism.
	Connell	Edinb. N. Phil. J., XIX, 159.	Electrolysis of ethers.
	Martens	Bull. Acad. Brus., II, 57, 18.	Theory of electrolysis.
	Poggendorf	Phil. Mag., 3, VII, 421.	Vindication of Faraday.
	Van Mons	Bull. Acad. Brus., I, 11, 199.	Theory of electrolysis.



1835	Walford	Phil. Mag., 3, VIII, 170,	Davy's theory of electrolysis.
1836	Becquerel	C. R., II, 230.	Extraction of Ag from the ore.
	De la Rive	Phil. Mag., 3, IX, 234.	Nobili's discoveries.
	De la Rive	" 1836.	Electro-metallurgy.
	Einbrodt	A. c. p., 2, LXI, 262.	Theory of electrolysis.
	Elkington	Rep. of Arts, 4, VIII, 223.	Gilding.
	Faraday	Phil. Mag., 3, IX, 60.	Passive iron.
	Gherardi	Nov. Com. Bon., 1, V, 132.	Heat in electrolysis.
	Paillette	C. R., III, 724.	Electro-chem. phenomena.
	Schönbein	Pogg., XXXVIII, 449.	Passive iron.
	Solly	Phil. Mag., 3, IX, 53; 3, VIII, 130.	Electrol. of Cl, Br, I.
	?	Dingl. J., LXII, 77.	Arborization.
1837	Becquerel	C. R., IV, 824.	Electrolysis in soluble bodies.
	"	" 831.	Influence of surface on electrolysis.
	"	" V, 88; Berzelius, Jahresb., XVI, 129.	Electrolysis in the formation of minerals.
	"	Phil. Mag., 3, X, 154.	Extraction of minerals by electrolysis.
	Bird	" " 357; J. pr. chem., X, 310.	Electrolysis of albumen.
	Bird	Phil. Mag., 3, X, 376.	Electrolysis by long continued currents.
	Connell	" " 93.	Electrol. of iodic acid.
	Cross	C. R., IV, 882.	Compounds by electrol.
	De la Rive	Ann. Chem. Pharm., XXIV 160.	Electrolysis of chemical compounds.
	Dulk	Ann. Chem. Pharm., XXIV 161.	The same.
	Elkington	Rep. of Arts, 4, VIII, 354.	Platinum electro-metallurgy.
	Faraday	Phil. Mag., 3, X, 175.	Effect of electrolysis on iron.
	Fox	" " 171.	Crystals by electrolysis.
	Noad	" " 276; XI, 48.	Effect of electrolysis on iron.
	Paillette	C. R., IV, 342.	New substance by electrolysis.
	Pouillet	" 785.	Electrolysis of water.
	Schönbein	Phil. Mag., 3, X, 133, 172, 267, 425.	Passive iron.
	Sturgeon	Ann. Elect., I, 11.	Analysis by electrolysis.
1838	Becquerel	C. R., XXII.	Electrolysis by weak currents.
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	Bird	Am. J. Sci., 1, XXXIII, 267.	Crystals by electrolysis.
	Böttiger	Phil. Mag., 3, XI, 298.	Colors by electrolysis.
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	Elkington and Barratt	Br. Pat. Rep., 1838, 1742; Lond. J., XIX, 79.	Electro-metal. of zinc.



1838	Faraday	Phil. Mag., 3, XI, 206, 358.	Electrolysis.
	Lepage	C. R., VI, 420.	Passive iron.
	Matteucci	Phil. Mag., 3, XIII, 469.	Platinum electrodes.
	Pasley	Bull. Soc. l'Ind., XXXVII, 123.	Passive iron.
	Schönbein	C. R., VI, 421, 277.	Peroxides by electrolysis.
	Schönbein	Phil. Mag., 3, XI, 311.	Action of peculiar currents
1839	Becquerel	C. R., VIII, 783.	Sulphates by electrolysis.
	Becquerel	" VIII, 497.	Electrolysis of water.
	Böttiger	Ann. Ch. Pharm., XXIX, 77	Electrolysis.
	Daniell	Phil. Mag., 3, XV, 317; Phil. Trans., 1837.	Electrolysis of binary compounds.
	Guggsworth	Ann. Elect., March, 1839.	Electro-metallurgy.
	Grove	C. R., VIII, 802.	Electrolysis of water.
	Jacobi	Phil. Mag., 3, XV, 161.	Mixed O and H by electrolysis.
	J. B. Maas	" 3, XIV, 446.	Platinum electrodes.
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	Matteucci	C. R., VIII, 840; A. c. p., 2, LXXIV, 99.	Electrolysis.
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1840	Arago	C. R., X, 375, 870.	Electro-metallurgy.
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	Boquillon	C. R., X, 771; XI, 25, 120; Bull. Soc. l'Ind., XXXIX, 305, 339.	Electro-metallurgy.
	Böttiger	Pogg., L, 45.	Electrol. of Mn. salts.
	Boutowski	C. R., X, 841.	Electro-metallurgy.
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	Cartwright	Ann. Elect., V, 236.	Electrotypes.
	Coulter	C. R., XI, 531, 825.	Electro-metallurgy.
	Daniell	Phil. Mag., 3, XVII, 297, 349; Ann. Ch. Pharm., XXXVI, 321; Arch. Elect. I, 594.	Electrolysis of binary compounds.
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	De la Rive	Pogg., LIV, 402.	Electrodes of Pt., Ag and Cu.
	Demidoff	C. R., X, 375.	Electro-metallurgy.
	Dumas	Ann. Ch. Pharm., XXX, 288; Phil. Mag., 3, XVII, 183.	Theory of electrolysis.
	Elkington	Br. Pat. Rep., 1840, 8447; Rep. of Arts, 4, XVI, 239; Lond. J., XIX, C. S. 83; Mech. Mag., XXXIII, 397; Ann. Electr., VII, 377; C. R., XIII, 636, 998.	Electro-gilding.
	Faraday	F. R., II, 25, 59.	Electrolysis.
	Gorke	Phil. Mag., 3, XVII, 299.	Electro-chem. equivalents.

1840	Jacobi	Anz. Polyt. J., LXXV, 110.	Applications of electrol.
	Jotard	C. R., XI, 713.	Electro-metallurgy.
	Kobell	Bull. Soc. l'Ind., XXXIX, 481; XL, 10.	The same.
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	Lockett	Br. Pat. Rep., 1840, 8610; Lond. J., XIX, C. S. 89; Mech. Mag., XXXIV, 221.	The same.
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	Richoux	" XI, 636.	The same.
	Schönbein	Basel. Ber., IV, 66; Bibl. Univ., XXVIII, 342; Pogg., L, 616; Arch. Elect. IV, 333; Phil. Mag., 3, XVII, 293; Proc. R. Soc. IV, 226; Edinb. N. Phil. J., XXIX, 178; C. R., X, 679; Ann. Elect., VII, 470; Am. J. Sci., 1, LXI, 43; Br. As. A. Sci., 1840, 209.	Ozone by electrolysis.
	Shore	Br. Pat. Rep., 1840, 8407; Ann. Elect., VII, 38.	Electro-metallurgy.
	Solly	Phil. Mag., 3, XVI, 309.	Precipitation of Cu. by electrolysis.
	Soyer and Ingé	C. R., XI, 292.	Electro-metallurgy.
	Spencer	Br. Pat. Rep., 1841, 8865; Rep. of Arts, XVI, N. S., 287; Lond. J., XX, C. S., 166; Mech. Mag., XXXV, 282; Inv. Adv., V, 180; G. Sci. Mis., IV, 62; Ann. Elect., VII, 380; Am. J. Sci., 1, XL, 157.	The same.
1841	Sturgeon	Ann. Elect., V, 484.	Electrotypes.
	Von Kobell	Gel. Anz., LXXXVIII, LXXXIX; J. pr. Chem., XX, Nos. 3, 4; Ann. Elect., V, 198.	The same.
	Arago	C. R., XII, 509, 779, 957.	Electro-metallurgy.
	"	" XIII, 26.	Electro-metallurgy in photography.
	Barratt	Br. Pat. Rep., 1841, 9077; Rep. of Arts, XVII, N. S., 367; Mech. Mag., XXXVI, 476; Lond. J., XX, C. S., 438.	Electro-met. of alloys.
	Becquerel	Arch. Elect., 1, 281.	Electrolysis of water.
	"	C. R., XVII, and XVIII; Ann. Elect., VI, 411.	Chemical force of currents
	Boquillon	C. R., XIII, 833, 1157; Ann. de M., III, XIX, 429; Bull. Soc. l'Ind., XL, 10.	Electrotypes.
	Connell	Arch. Elect., I, 401; Phil. Mag., XVII, 353.	Electrolysis of alcohols.
	David	C. R., XIII, 965.	Electro-metallurgy.
	Davy	Ann. Elect., VII, 173.	Electrolysis.

1841 Dent	Am. J. Sci., 1, XLI, 402.	Electro-gilding.
De la Rive	Arch. Elect., I, 175.	Electrolysis by magneto-electricity.
Fizeau	C. R., XII, 401.	Electro-metallurgy in photography.
Grove	Phil. Mag., 3, XIX, 99; XVIII, 543.	Electro-nitrogurets.
Hunt	Ibid., 3, XIV, 442.	Electrol. of copper salts.
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Martens	Arch. Elect., II, 558.	Electrolyses.

1842	Mattenucci	Ann. Elect., IX, 34.	Electrol. of silver salts.
	Pearson	" IX, 496.	Electrolysis of water.
	Perrot	C. R., XIV, 370.	Electro-metallurgy.
	Peyré	" XIV, 73; Bull. Soc., l'Ind., XLI, 55.	The same.
	Poggendorff	Arch. Elect., III, 117; Ann. Elect., IX, 143.	Ferric acid by electrol.
	Ruolz	C. R., XIV, 252; XV, 280, 466; Bull. Soc. l'Ind., XLI, 424.	Electro-metallurgy of zinc.
	Schönbein	Arch. Elect., II, 241, 509.	Electrolysis.
	Sorrel	C. R., XIV, 228, 339.	Electro-metallurgy of zinc.
	Soyer	" XV, 466.	Electro-metallurgy.
	"	" XV, 784.	Bodies preserved by elec- tro-metallurgy.
	Tuck	Br. Pat. Rep., 1842, 9379; Lond. J., XXII, C. S., 458; Rec. Pat. Inv., I, 373.	Electro-metallurgy.
	" V "	Phil. Mag., 3, XX, 72.	New theory of electrolysis.
	Von Kobell	Bull. Ac. Sci. Br., 1, IX, 2°, 315; Am. J. Sci., XLVIII, 222.	Electro-metallurgy.
	Weber	Arch. Elect., II, 661.	Electrolysis of water.
	Wollaston	Ann. Elect., IX, 518.	The same.
1843	Arago	C. R., XVI, 503.	Electro-metallurgy.
	Barratt	Br. Pat. Rep., 1843, 9786; Lond. J., XXIV, C. S., 24.	The same.
	Bequerel	C. R., XVII, 1, 53; A. c. p., 3, VIII, 402; Arch. Elect., III, 345; Ann. Elect., X 151.	Metallic oxides by electrol.
	"	C. R., XVII, 87, 837; Arch. Elect., III, 671.	Electro-metallurgy.
	Blackwell	Br. Pat. Rep., 1843, 9041; Rep. of Arts III, E. S., 363; Lond. J., XXVI, C. S., 16; Mech. Mag., XLII, 108.	Electro-metallurgy of Cu.
	Boquillon	C. R., XVII, 1198, 1263.	Discussion about electrol.
	De la Rive	Arch. Elect., III, 308; C. R., XVI, 1089.	Ozone by electrolysis.
	"	Arch. Elect., II, 175.	Electrolysis of alcohol.
	"	C. R., XVI, 881.	Heat in electrolysis.
	Dujardin	" XVII, 1200.	Electro-metallurgy.
	Hare	Phil. Mag., XXII, 460.	Electrolysis of salts.
	Hull	Br. Pat. Rep., 1843, 9917.	Elec. of fermented liquors.
	Hulot	C. R., XVII, 1309.	Electro-metallurgy.
	Mallet	Arch. Elect., III, 661.	Bodies preserved by elec- tro-metallurgy.
	Mourey	C. R., XVII, 37.	Electro-metallurgy of Ag.
	"	Ann. d. M., 4, III, 579; C. R., XVI, 660.	Silver-plating.
	Paret	C. R., XIV, 1001.	Electrolysis by magneto- electricity.
	Pelouze	" XVI, 766.	Electro-metallurgy in pho- tography.



1843	Poggendorff Poole	Pogg., LXXVI, 586. Br. Pat. Rep., 1843, 9741; Rep. of Arts, III, E. S., 6; Lond. J., XXIV, C. S., 14; Mech. Mag., XL, 14.	Electrol. of bismuth salts. Electro-metallurgy.
	Schönbein	Pogg., LIX, 240; Arch. Elect. III, 295.	Ozone by electrolysis.
1844	Becquerel	C. R., XVIII, 362; Arch. Elect., IV, 156, 224; Phil. Mag., 3, XXV, 73.	Electrolysis.
	"	A. c. p., 3, XI, 162, 257; Arch. Elect., IV, 557.	Electrolysis by terrestrial currents.
	"	C. R., XVIII, 197.	Metallic oxides by electrol.
	"	" XVIII, 449, 554, 715; Arch. Elect., IV, 520, 552.	Precipitation of metals.
	Bietz	Pogg., LXI, 209; Arch. Elect. IV, 276.	Electrolysis.
	"	Pogg., LXII, 234.	Passive iron.
	Boquillon	C. R., XIX, 440.	Electro-metallurgy.
	Christoffe	" XIX, 405; Bull. Soc. l'Ind., XLIII, 193.	The same.
	Cannet	Arch. Elect., IV, 265.	Electrolysis of salts.
	Daniell	Phil. Trans., 1844; Phil. Mag., 4, XXIV, 463; XXV, 175, 246; Arch. Elect., IV, 289; Pogg., LXIV, 18.	Electrol. of binary com- pounds.
	De la Rive	Arch. Elect., IV, 454.	Ozone by electrolysis.
	Desbordes	C. R., XIX, 1450.	Silver-plating.
	Elkington	Arch. Elect., IV, 515.	Electro-metallurgy.
	Fontaine- moreau	Br. Pat. Rep., 1844, 10282.	Electro-met. of alloys.
	Joule	Phil. Mag., 3, XXIV, 106.	Intermittent currents in electrolysis.
	Hull	Dingl. J., XCIV, 388.	Electrolysis of wine.
	Kobell	Arch. Elect., IV, 584.	Electro-metallurgy.
	Levol	C. R., XVIII, 708, 837.	Precipitation of metals.
	Louyet	" XIX, 1180.	Zinc-plating.
	Martens	Pogg., LXI, 121.	Passive iron.
	Matteucci	A. c. p., 3, XII, 122.	Electrolysis.
	Napier	Phil. Mag., 3, XXV, 379.	Electrolysis of double cya- nides.
	Nouailher	Bull. Soc. l'Ind., XLIII, 54; XLV, 298.	Electro-metallurgy.
	Schönbein	Arch. Elect., IV, 333.	Ozone by electrolysis.
	Smee	" IV, 643.	Theory of electrolysis.
1845	Avogadro	A. c. p., 3, XIV, 330; Mem. Acad. Sci. Turin, II, VIII.	Electro-chemical series.
	Becquerel	C. R., XX, 1509; Arch. Elect., V, 233.	Electrolysis by terrestrial currents.
	"	A. c. p., 3, XIII, 216.	Electrolysis.
	Bietz	Pogg., LXIII, 415.	Passive iron.
	Christoffe	C. R., XXI, 1382.	Electro-metallurgy.
	Church	Br. Pat. Rep., 1845, 11010.	Electrolysis of coke.
	Dechaud	C. R., XX, 1659, 1712; XXI, 278; Bull. Soc. l'Ind., XLIV, 207, 271.	Extraction of Cu from minerals.
	De la Rive	C. R., XX, 1291.	Ozone by electrolysis.

1845	De la Rive	Arch. Elect., V, 345; Chem. Soc. Mem., II, 300; Phil. Mag., 3, XXVII, 15; Am. J. Sci., 1, XLIX, 390.	Structure of metals deposited by electrolysis.
	Desbordeaux	C. R., XX, 103, 248, 353; XXI, 162.	Silver-plating.
	Jacobi	Arch. Elect., V, 184.	Electro-metallurgy.
	Hunt	Chem. Soc. Mem., II, 319.	Actinic influence on electrolysis.
	Millon	Arch. Elect., V, 303.	Electrolysis of water.
	Napier	Chem. Soc. Mem., II, 158, 255; Arch. Elect., V, 159; Phil. Mag., XXVI, 211.	Decomposition of double cyanides.
	Normand	Br. d'Inv., II, 248.	Gilding on silver.
	Parkes	Br. Pat. Rep., 1845, 10860; Rep. of Arts, VII, E. S., 358.	Electro-metallurgy.
	Perrot	C. R., XXI, 1328.	The same.
	Philippe	Bull. Soc. l'Ind., XLIV, 218; XLVII, 711.	The same.
	Rivier	Arch. Elect., V, 24.	Ozone by electrolysis.
	Pouillet	C. R., XX, 1544.	Electrolysis.
	Roseleur	Br. d'Inv., V, 123.	Gilding.
	Ruolz	C. R., XXI, 1437.	Electro-metallurgy.
	Schönbein	Pogg., LXV, 161; Arch. Elect., V, 11, 337; Br. A. A. Sci., 1845, 91.	Ozone by electrolysis.
	Soyer	Bull. Soc. l'Ind., XLIV, 88.	Electro-metallurgy.
	Tourasse	C. R., XXI, 378.	Mirrors silvered by electrolysis.
	Williamson	Chem. Soc. Mem., II, 305; Phil. Mag., XXVII, 372; Arch. Elect., V, 188.	Ozone by electrolysis.
1845	Barral	C. R., XXIII, 35.	Electro-gilding.
	Becquerel	" XXII, 781; Dingl. J., CI, 267.	Electrolysis of minerals.
	Boch	Bull. Soc. l'Ind., XLV, 97.	Electro-metallurgy.
	Boquillon	C. R., XXIII, 855.	The same.
	Hankel	Pogg., LXIX, 263.	Electrolysis of salts.
	Howell	Br. Pat. Rep., 1846, 11065; Pat. J., I, 179.	Electro-metallurgy of Pt.
	Hulot	Bull. Soc. l'Ind., XLVI, 572.	Electro-metallurgy.
	Lemercier	Br. d'Inv., VI, 209.	The same.
	Matteucci	A. c. p., 3, XVI, 257.	Electro-chemical action.
	Napier	Phil. Mag., 3, XXIX, 92.	Theory of electrolysis.
	Perrot	C. R., XXIII, 767.	Electro-metallurgy.
	Paget	Br. Pat. Rep., 1846, 11448; Rep. of Arts, X, 83, E. S.; Lond. J., XXX, C. S., 417; Pat. J. II, 885; Eng. & Arch. J., X, 292.	The same.
	Ramont	Br. d'Inv., VII, 131.	Electro-metallurgy of Ag.
	Woolley	C. R., XXII, 924.	Electrotyping.
	Wood	Sci. Amer., XII, 142.	Electro-metallurgy.
	Barral	C. R., XXV, 556, 602, 760.	Priority in electro-gilding.

1847	Becquerel	C. R., XXIV, 505.	Electrolysis.
	Bouquillon	" XXV, 207.	Priority in electrotyping.
	Boutellier	Br. d'Inv., XI, 201.	Electro-metallurgy of Ag.
	Coblentz	C. R., XXV, 28.	Electro-plating.
	Crosse	Br. Pat. Rep., 1847, 11604.	Electrolysis of liquors.
	Delaurie	C. R., XXIV, 975.	Precipitation of metals.
	De la Salzedo	Br. Pat. Rep., 1847, 11878; Rep. of Arts, XI, E. S., 293; Lond. J., XXXII, C. S., 260; Pat. J., IV, 505; Eng. & Arch. J., XI, 169.	Electro-metal, of bronze.
	Garson	C. R., XXIV, 466.	Applications of electrol.
	Grove	Am. J. Sci., 2, IV, 411.	Effect of area of electro- lyte.
	Kolbe	Ann. Pharm., LXIV, 236.	Electrol. of organic bodies.
	Kroening	C. R., XXV, 818.	Silk gilded.
	Maas	Bull. Ac. Sci., Brus., XIV, 2, 10.	Passive iron.
	Osann	Pogg., LXXI, 458; LXXII, 468.	Ozone by electrolysis.
	Perrot	C. R., XXV, 347, 428.	Priority in electro-gilding.
	Rochas	" XXV, 312.	Electro-plating.
	Ruolz	" XXV, 555, 602.	Priority in electro-gilding.
	Sainte-Preure	" XXIV, 1158.	Electro-gilding.
	Santayra	Br. d'Inv., XII, 334.	Electro-metallurgy.
	Woilley	C. R., XXV, 17.	The same.
1848	Clement	Br. Pat. Rep., 1848, 12335.	Electrolysis of sugar.
	Junot	Br. d'Inv., XIII, 1.	Electro-gilding.
	Napier	Chem. Soc. Mem., III, 47.	Theory of electrolysis.
	Oscroft	Pogg., LXXV, 386.	Ozone by electrolysis.
	Poitevin	C. R., XXVI, 346.	Electro-metal, of bronze.
	Rivot	Bull. Soc. l'Ind., XLVII, 356.	Electrolysis of minerals of Cu.
	Woilley	C. R., XXVI, 506, 573.	Electro-metallurgy.
	"	Bull. Soc. l'Ind., XLVII, 260.	Electro-metal, of bronze.
1849	Becquerel	A. c. p., 3, XXVII, 5; J. pr. Chem., XLVIII, 193; C. R., XXVIII, 650; JB., 1849, 201.	Theory of electrolysis.
	Bonis	C. R., XXIX, 403.	Electrolysis.
	Fontaine- moreau	Br. Pat. Rep., 1849, 12523; Mech. Mag., LI, 284; Pat. J., IX, 55.	Electro-metal, of brass.
	Kolbe	Ann. Chem. Ph., LXIX, 257, 279; J. pr. Chem., XLII, 311; JB., 1847, 558; 1849, 335.	Electrolysis of organic bodies.
	Parkes	Br. Pat. Rep., 1849, 12334; Rep. of Arts, XIV, E. S., 361; Mech. Mag., LI, 309; Pat. J., VIII, 42.	Electro-metal, of alloys.
	Poggendorff	Arch. ph. nat., X, 133.	Electrolysis of bismuth.
	Poncil	Br. d'Inv., XIV, 213.	Gilding on zinc.

1849	Russell	Br. Pat. Rep., 1849, 12526; Rep. of Arts, XV, E. S., 163; Mech. Mag., LI, 285; Pat. J., IX, 70.	Electro-metallurgy of alloys.
	Schönbein	Pogg., LXXXVIII, 289; Arch. ph. nat., XIII, 192; JB., 1849, 201.	Theory of electrolysis.
	Smith	Br. Pat. Rep., 1849, 12654; Mech. Mag., LI, 571; Pat. J., VIII, 224.	Electro-metallurgy of Ag.
	?	Sci. Amer., V, 140.	Electrotyping.
1850	Avogadro	A. c. p., 3, XXIX, 248; Mem. Ac. Sci. Turin, 2, XI.	Electro-chemical series.
	Becquerel	C. R., XXXII, 83.	Electrolysis influenced by light.
	Brazier	Ann. Pharm., LXXV, 265; JB., 1850, 399.	Electrol. of organic acids.
	Lanaux	Br. d'Inv., XVI, 270.	Electro-metallurgy of Pt.
	Lefèvre	" XVIII, 313.	Electro-metallurgy.
	Matteucci	C. R., XXXII, 145.	Electrolysis of salts.
	Roseleur	Br. Pat. Rep., 1850, 13020; Mech. Mag., LIII, 250; Pat. J., IX, 296.	Electro-metallurgy of Sn.
	Steele	Br. Pat. Rep., 1850, 13216; Mech. Mag., LIV, 134; Pat. J., X, 220.	Electro-metall. of alloys.
	Ward	Rev. Sci., XXXIX, 34.	Electro-metallurgy.
1851	Becquerel	A. c. p., 3, XXXII, 645.	Electrol. effected by light.
	"	C. R., XXXIV, 29.	Minerals by electrolysis.
	Bouillet	A. c. p., 3, XXXIV, 153; C. R., XXXIII, 613; XXXIV, 193, 282.	Electrolysis of double cyanides.
	Brooman	Br. Pat. Rep., 1851, 13845.	Electrolysis of organic matter.
	Carpnier	Br. d'Inv., XXIV, 178.	Electro-metallurgy.
	Cowper	Br. Pat. Rep., 1851, 13513; Mech. Mag., LV, 158; Pat. J., XI, 279.	Gutta-percha in electrotyping.
	Delamotte	Br. d'Inv., XXXIV, 167.	Electro silvering.
	Delisle	" XV, 70.	Electro-metallurgy.
	Fremy and Becquerel	C. R., XXXIV, 379; A. c. p., 3, XXXV, 62; J. pr. Chem., LVI, 124; Ann. Pharm., LXXXIV, 204; Phil. Mag., 4, III, 543; J. Chem. Soc., V, 272.	Electrolysis.
	Knoblouet	Rev. Sci., XXIX, 368.	Electro-metallurgy.
	Matteucci	A. c. p., 3, XXXIV, 281; C. R., XXXIII, 663.	Electro-chemical combinations.
	Palmer	Br. Pat. Rep., 1851, 13726; Mech. Mag., LVI, 197.	Gelatine moulds in electrotyping.
	Ruolz	C. R., XXXIV, 248.	Electrolysis of double cyanides.
	Thompson	Phil. Mag., 4, II, 429.	Mechanical theory of electrolysis.



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- 1852 Almeida C. R., XXXVIII, 682; Electrolysis of salts.  
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227, JB., 1852, 6.
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- Elkington Sci. Amer., VIII, 402. Electrotypes.
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- Helle Br. d'Inv., XXII, 334. Electro-silvering.
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- Jamin " XXXVIII, 390, 443; Electrolysis of water.  
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- Leblanc C. R., XXXVIII, 444; Electrolysis of water.  
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- Morris " XXVIII, 50; Br. Electro-metallurgy.  
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- Paradis Br. d'Inv., XXII, 306. The same.
- Petrie Br. Pat. Rep., 1852, 14346. The same.
- Power Br. d'Inv., XXIII, 221, 224. Electro-metallurgy of Ag.
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- Roux Br. d'Inv., XXIV, 222. Electro-metallurgy.
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256.

1852	Soret	C. R., XXXVIII, 445; Arch. ph. nat., XXV, 175, 263; Phil. Mag., 4, VII, 459; J. pr. Chem., LXII, 40; JB., 1852, 257.	Electrolysis.
	Symonds	Br. Pat. Rep., 1852, 996.	Cleaning metal surfaces.
	Viard	A. c. p., 3, XXXVI, 129; Arch. ph. nat., XXI, 230.	Electrol. of oxygen.
	Wall	Br. Pat. Rep., 1852, 576.	Electrolysis of $H_2SO_4$ .
	Watson	" " 575.	Pigments by electrolysis.
	Bequerel	A. c. p., 3, XXXIX, 48.	Electrolysis of gases.
1853	"	C. R., XXXVI, 209; Bibl. Univ., N. S., I, 155; JB., 1853, 8.	Electrolysis of minerals.
	Bishop	Br. d'Inv., XXIX, 132.	Electro-metallurgy of Cu.
	Bolley	Sci. Amer., IX, 96; Chem. Gaz., 1853; 354; Pharm. J. Trans., XII, 231.	Electro-plating.
	Buff	Ann. Pharm., LXXV, 1; Arch. ph. nat., XXII, 344; Chem. Soc. Q. J., IV, 47; Am. J. Sci., 2, XV, 426; J. B., 1854, 280.	Laws of electrolysis.
	Bussey	C. R., XXXVI, 540.	Electrol. of Si, Ti, Mg.
	Davy	Bibl. Univ., N. S., 1, 165;	Preservation of ship-sheathing.
	Delamotte	Br. d'Inv., XXIX, 181; XXXII, 321.	Silvering.
	De Medeiros	Br. Pat. Rep., 1853, 1789.	Preservation of ship-sheathing.
	Fremy and Becquerel	Quart. J. Sci., V, 272; J. Pharm., XXXI, 320.	Electrolysis.
	Gore	Pharm. J. Trans., XIII, 21.	Electro-metallic deposition.
	Gourlier	Br. d'Inv., XXVII, 332.	Electro-metallurgy.
	Grove	Phil. Mag., 4, V, 201.	Electrolysis of salts.
	Guthrie	Arch. ph. nat., XXII, 371; Ann. Pharm., XCIX, 64; JB., 1853, 573.	Electrolysis of organic bodies.
	Hittorf	Pogg., LXXXIX, 177; JB., 1854, 279.	Electrolysis.
	Hulot	C. R., XXXVII, 409.	Electro-metallurgy.
	Kard	Phil. Mag., 4, VI, 241.	Electrolysis of water.
	Masse	Br. d'Inv., XXIX, 185.	Electro-silvering.
	Masson	" XXXIII, 144; Phil. Mag., 4, VI, 457.	Electro-metallurgy of Au.
	Mutis	Br. d'Inv., XXXI, 154.	Electro-metallurgy.
	Nickles	Arch. ph. nat., XXIV, 79; C. R., Aug., 1853.	Passive Ni and Co.
	Pershouse	Br. Pat. Rep., 1853, 2379.	Electro-metal. of alloys.
	Prax	Br. d'Inv., XXVIII, 412.	Electro-gilding.
	Shepard	Br. Pat. Rep., 1853, 1591.	Electrolysis of water.
	Tournière	" " 1641.	Manufacture of $Na_2CO_3$ .
	?	J. Fr. Inst., 3, XXVI, 137.	Electro-plating on china.
	?	Sci. Amer., IX, 21.	Electrotyping.

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"	C. R., XXXVIII, 757; Phil. Mag., 4, VIII; Am. J. Sci., 2, XVIII, 382.	Electrolysis in chemical action.
Black	Dingl. J., CXXXII, 31.	Electrolysis.
Bocquet	Br. d'Inv., XXXV, 293.	Electro-metallurgy of Cu.
Boucher	" XL, 94.	" " " Zn.
Buff	Ann. Pharm., LXXXV, 1; J. Chem. Soc., VI, 54.	Laws of electrolysis.
"	Ann. Pharm., LXXXVIII, 117; Instit., 1854, 80; JB., 1854, 281.	The same.
Bull	Arch. ph. nat., XXV, 65; Ann. Pharm., LXXXVII, 117.	Electrolytic researches.
Bunsen	Pogg., XCI, 619; A. c. p., 3, XLI, 354; J. Pharm., 3, XXV; JB., 1854, 320.	Electrol. of Mn and Cu.
"	C. R., XLI, 717; Pogg., XCII, 648; J. Pharm., 3, XXVI, 311; Dingl. J., CXXXIII, 273.	Electrolysis of the alkali line earths.
Callan	Phil. Mag., 4, VII, 73; J. Fr. Inst., 3, XXVIII, 203, 336.	Electrolysis of water.
Coblence	C. R., XXXIX, 846.	Electro-metallurgy.
Connell	Phil. Mag., 4, VII, 426.	Electrolysis of water.
Daniel	Pogg. LXIV, 18; JB., 1854, 278.	Electrolysis of salts.
De la Rive	Arch. ph. nat., XXV, 275.	Electrolysis of water.
Denny	Br. Pat. Rep., 1854, 478.	Electro-metallurgy of Cu.
Dida	Br. d'Inv., XXXIX, 79.	" " " Zn.
Dumas	C. R., XXXVIII, 444.	Electrolysis of water.
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"	C. R., XXXVII, 580; Instit., 1853, 349; JB., 1854, 281.	Theory of electrolysis.
"	Arch. ph. nat., XXV, 180.	Electrolysis of water.
Gervaisot	Br. d'Inv., XXXIV, 248.	Electro-metallurgy
Gore	J. Fr. Inst., 3, XXVII, 353; J. Pharm., 3, XXV, 475.	Electrolysis of Al and Si.
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Marignac	A. c. p., 3, XXXVIII, 148 ; J. Chem. Soc., 1854, 260.	Heat in electrolysis.
Matteucci	C. R., XXXIX, 258.	Electrol. in chem. action.
Meideck	Br. d'Inv., XXXVIII, 186.	Electro-metallurgy.
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Spigereel	Br. d'Inv., LXXVIII, 271.	Electro-silvering.

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## LIST OF ABBREVIATIONS.

A. c. p.	Annales de chimie et de physique,—Paris.
Am. Chem.	American Chemist,—New York.
Am. J. Min.	American Journal of Mining,—New York.
Am. J. Sci.	American Journal of Science and Arts, Silliman and Dana,—New Haven, Conn.
Ann. Elect.	Annals of Electricity,—London.
Ann. Ch. Pharm.	Annalen der Chemie und Pharmacie,—Heidelberg.
Ann. d. M.	Annales des mines,—Paris.
Ann. N. Y. Acad. Sci.	Annals of the New York Academy of Sciences,—New York.
Ann. Phys. Beibl.	Beiblätter zu den Annalen der Physik und Chemie.
Arch. Elect.	Archives de l'électricité,—Genève.
Arch. ph. nat.	Archives des sciences physique et naturelles,—Genève.
Arch. Pharm.	Archiv der Pharmacie,—Lemgo.
Arch. Neer Sci.	Archives Néerlandaises des sciences exactes et naturelles,—Haarlem.
Berl. Acad. Ber.	Bericht über die Verhandlungen der K. Preussische Academie der Wissenschaften zu Berlin.
Berl. Monb.	Berlin. Monatsbericht.
Berz. Jahresb.	Jahresbericht über die Fortschritte der Chemie,—Berzelius, Tübingen.
Bibl. Univers.	Bibliothèque universelle des sciences,—Genève.
Br. A. Ad. Sci.	Report of the British Association for the Advancement of Science.
Basel, Ber.	Bericht über die Verhandlungen der naturforschende Gesellschaft zu Basel.
Br. d'Inv.	Descriptions des machines et procédés spécifiés dans les brevets d'inventions,—Paris.
Br. Pat. Rep.	British Patent Reports.
Bull. Acad. Brus.	Bulletin de l'Académie royale,—Bruxelles.
Bull. de St. Pétersb.	Bulletin de classe physico-mathématique,—St. Pétersbourg.
Bull. Sci. St. Pétersb.	Bulletin Scientifique publié par l'Académie Imp. des Sciences,—St. Pétersbourg.
Bull. Soc. Chim.	Bulletin de la Société chimique de Paris.
B. Soc. l'Ind.	Bulletin de la Société d'encouragement pour l'industrie nationale,—Paris.
C. C.	Chemisches Centralblatt,—Leipzig.
Chem. Gaz.	Chemical Gazette, Francis and Croft,—London.
Chem. News.	Chemical News, Crookes,—London.
Chem. Soc. Q. J.	Quarterly Journal of the Chemical Society,—London.
Chem. Soc. Trans.	Transactions of the Chemical Society,—London.
Chem. Soc. Mem.	Memoirs of the Chemical Society—London.
Cimento.	Il Cimento, giornale di fisica, ecc.,—Pisa.
Cosmos	Cosmos, les Mondes, Moigno, Paris.

C. R.	Comptes rendues des séances de l'Académie des sciences.—Paris.
Dingl. J.	Polytechnisches Journal, Dingler—Stuttgart.
D. C. Ges. or Deut. Ges. Ber.	Berichte der deutschen chemischen Gesellschaft zu Berlin.
Edinb. J. Sci.	Edinburgh Journal of Science.—Brewster.
Edinb. N. Phil. J.	Edinburgh New Philosophical Journal.
Edinb. Phil. J.	Edinburgh Philosophical Journal.
Elec. Mag.	Electrical Magazine.—London.
Eng. Arch. J.	Engineers' and Architects' Journal.—London.
F. R.	Faraday's Researches, Taylor.—London, 1844.
Gaz. Chim. Ital.	Gazzeta chimica Italiana.—Palermo.
Gaz. de L.	Gazette de Lausanne.
Gehlen's J.	Allgemeines Journal der Chemie, Gehlen,—Berlin.
Gel. Anz.	Gelehrte Anzeigen.—München.
Gilb. Ann.	Annalen der Physik, Gilbert.—Halle.
Göttl. Alm.	Göttling's Almanach für Scheidekünstler,—Weimar.
G. Sci. Mis.	Griffin's Scientific Miscellany.—Glasgow.
Hist. l'Acad. Instit.	Histoire de l'Académie des Sciences,—Paris.
Inv. Ad.	L'Institut.—Paris.
JB. or Jahreshb.	Inventor's Advocate.—London.
	Jahresbericht über die Fortschritte der Chemie,—Giessen.
Jen. Zeitschr.	Jenaische Zeitschrift für Medicin und Naturwissenschaft,—Leipzig.
J. Fr. Inst.	Journal of the Franklin Institute—Philadelphia.
J. pr. C.	Journal für praktische Chemie, Erdmann, Leipzig.
J. Chem. Soc.	Journal of the Chemical Society.—London.
J. Roy. Inst.	Journal of the Royal Institution of Great Britain.
Journ. de Phys.	Journal de physique, Rozier.—Paris.
J. Pharm.	Journal de pharmacie et de chimie,—Paris.
J. Polyt.	Journal de l'École polytechnique,—Paris.
Kastn. Archiv.	Archiv. für die gesammte Naturlehre, Kastner,—Nürnberg.
Laborat.	Labsratory.—London.
Liebig's Ann.	Annalen der Chemie und Pharmacie—Liebig.
Lond. J.	London Journal of Arts and Sciences,—Newton.
Mech. Mag.	Mechanics' Magazine.—London.
Mém. de l'Acad. Sci.	Mémoires de l'Académie des sciences,—Paris.
Mém. Soc. Imp. M.	Mémoires de la Société impériale des naturalistes,—Moscow.
Mem. Acad. T.	Memoirs of the Royal Academy of Sciences, Turin.
Neues Jour.	Neues Journal für Chemie und Physik, Schweigger-Seidel, Nürnberg.
N. Ed. Phil. J.	Edinburgh New Philosophical Journal, Jameson.
Nich. J.	Journal of Natural Philosophy, Chemistry and the Arts, Nicholson.—London.
N. Gehl.	Journal für Chemie und Physik, Gehlen, Leipzig.
N. Pét. Acad. Bull.	Bulletin de l'Académie des sciences de St. Pétersbourg.
Nov. Com. Bon.	Novi commentarii academiae scientiarum instituti Bonoviensis.—Bologna.
Pat. J.	Patent Journal.—London.
Pharm. Cent.	Pharmaceutisches Centralblatt,—Leipzig.

Pharm. J.	Pharmaceutical Journal and Transactions,—London.
Phil. Mag.	London, Edinburgh and Dublin Philosophical Magazine,—London.
Phil. Trans.	Philosophical Transactions of the Royal Society,—London.
Pogg.	Annalen der Physik und Chemie, Poggendorf,—Berlin.
Proc. Roy. Soc.	Proceedings of the Royal Society of London.
Quart. J. Sci.	Quarterly Journal of Science, Crookes,—London.
Rec. Pat. Inv.	Record of Patent Inventions,—London.
Rep. of Arts.	Repertory of Arts and Manufactures—London.
Rep. Br. Assoc.	Reports of the British Association for the Advancement of Science.
Rép. Chim. app.	Répertoire de chimie appliquée,—Paris.
Rép. Chim. pure.	Répertoire de chimie pure,—Paris.
Rev. Sci.	Revue des sciences—Paris.
Roma, Atti.	Atti dell' accademia Pontificia dei nuovi Lincei,—Roma.
Schweigg.	Journal für Chemie und Physik, Schweigger, Nürnberg.
Schweiz. polyt. Z.	Schweizerische polytechnische Zeitschrift,—Winterthur.
Sci Amer.	Scientific American, New York.
T. Ann.	Thompson's Annals,—London.
U. S. Pat. Rep.	United States Patent Reports.
Wien Akad. Ber.	Sitzungsberichte der naturwissenschaftliche Classe der Kaiserlich. Akademie der Wissenschaften zu Wien.
Zeitsch. Chem.	Zeitschrift für Chemie,—Göttingen.
Zeitschr. Chem. Pharm.	Zeitschrift für Chemie und Pharmacie,—Erlangen.
Zeitschr. anal. Chem.	Zeitschrift für analytische Chemie, Fresenius,—Wiesbaden.





